REMARKS

Please reconsider the application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application.

Disposition of Claims

Claims 1-44 are pending in the present patent application. Claims 1, 19, 23, and 41 are independent. The remaining claims depend, either directly or indirectly, from claims 1, 19, 23, and 41.

Drawings

The Applicant respectfully requests the Examiner to indicate whether the drawings submitted on March 17, 2007, are accepted as formal.

Claim Amendments

Claims 1, 19, 23, and 41 are amended to clarify aspects of the invention. Support for the amendments may be found, for example, in paragraphs [0033]-[0034], [0057]-[0059], [0073], [0085], [0111]-[0113], and [0116] of the originally-filed specification. Further, claims 16 and 38 are amended to depend from claims 1 and 23, respectively. Support for the amendments may be found, for example, in paragraph [0123] of the originally-filed specification. In addition, claims 2-3, 17-18, 20, 24-25, 39-40, and 42-44 are amended for conformity with the amendments to the independent claims and to address informalities objected to by the Examiner. Finally, claims 37-43 are renumbered 38-44 with dependencies to parent claims also incremented accordingly. No new matter has been added by any of the aforementioned amendments.

Claim Objections

As requested by the Examiner (*see* Office Action dated December 23, 2008, page 2) and discussed above, claims 37-43 are renumbered 38-44 with dependencies to parent claims also incremented accordingly. In view of these amendments, the Examiner's objection with respect to claims 37-43 is now addressed and should be withdrawn.

Double Patenting Rejection

Claims 1-44 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-70 of U.S. Patent Application No. 10/802,524. A timely filed terminal disclaimer in compliance with 37 CFR § 1.321 for U.S. Patent Application No. 10/802,524 is filed with this reply. Accordingly, withdrawal of this rejection is respectfully requested.

Rejection(s) under 35 U.S.C. § 112

Claims 1-44 are rejected under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter that the applicant regards as the invention. To the extent the rejection may apply to the pending claims, the rejection is traversed.

The Examiner contends that claims 1, 16, 19, 23, and 38 recite "receiving input data... including a plurality of input data calculations results;" however, it is unclear "what is encompassed by a plurality of input data calculations results as no source or manner of producing calculation results is specified." *See* Office Action dated December 23, 2008, page 3. Claims 1, 16, 19, 23, 38, and 41 are amended by way of this reply to recite, in part, "receiving a plurality of input data calculation results associated with a wellbore." The specification clearly describes calculation

results and provides numerous examples of calculations that are associated with a wellbore. *See* originally-filed specification at paragraph [0085]. From this description, one skilled in the art would clearly appreciate that the input data calculation results refer to the results of various wellbore calculations.

The Examiner contends that claims 1, 16, 19, 23, and 38 recite "generating said risk information;" however, it is unclear whether the risk information is "risk information generated in response to ranked risk values or some other risk information determined in a manner wholly separate from the generating step." *See* Office Action dated December 23, 2008, page 3. Claim 1 is amended by way of this reply to recite, in part, "A method of determining and displaying a risk assessment..." and "generating risk information in response to said plurality of ranked individual risks." Claims 16, 19, 23, 38, and 41 are amended to include substantially similar limitations. Thus, it is clear that the "risk information" of the independent claims refers to risk information generated in response to the ranked risk values.

In view of the above, independent claims 1, 19, 23, and 41 satisfy 35 U.S.C. § 112, second paragraph. Dependent claims 2-18, 20-22, 24-40, and 42-44 satisfy 35 U.S.C. § 112, second paragraph, for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Rejection(s) under 35 U.S.C. § 101

Claims 1-22 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. To the extent the rejection may apply to the pending claims, the rejection is traversed.

"A claimed process is surely patent-eligible subject matter under § 101 if: (1) it is tied to a particular machine or apparatus, *or* (2) it transforms a particular article into a different state or

thing." *In re Bilski*, No. 2007-1130, slip op. at 10 (Fed. Cir., 2008). The "transformation must be central to the purpose of the claimed process." *Id.* at 24. Further, the transformed article may include "any physical object or substance, or an electronic signal representative of any physical object or substance." *Id.* at 28.

The Examiner rejected claims 1-22 as failing to recite "transforming subject matter to a different state or thing or positively recite a sufficient tie to another statutory class of invention." Claim 1 is amended by way of this reply to recite, in part, "receiving a plurality of input data calculation results associated with a *wellbore*," "calculating a plurality of ranked individual risks extending along a depth of said wellbore," and "using said plurality of ranked individual risks to *modify* a *well design* for said *wellbore*; and performing a drilling operation at the wellsite based on the *well design*." In other words, amended independent claim 1 requires, in part, transforming (*i.e.*, calculating along a depth) wellbore data used to further transform (*i.e.*, modify) a well design for performing a drilling operation. One skilled in the art would clearly appreciate that the input data is representative of physical objects (*e.g.*, wellbore, etc.). *See* Specification at paragraph [0006]. Further, the risk information that is generated along the depth of the wellbore and then processed for display is integral to the purpose of modifying the well design. Thus, the transformation of the input data is clearly central to the purpose of the method as recited in amended independent claim 1.

For at least these reasons, claim 1 complies with the statutory subject matter requirement of 35 U.S.C. § 101. Claim 19 includes substantially similar limitations and, thus, complies with the statutory subject matter requirement of 35 U.S.C. § 101 for at least the same reasons as claim 1. Claims 2-18 and 20-22 depend either directly or indirectly from claims 1 and 19 and, thus, comply

with the statutory subject matter requirement of 35 U.S.C. § 101 for at least the same reasons. In view of this, withdrawal of this rejection is requested.

Rejection(s) under 35 U.S.C § 103

Claims 1-44 stand rejected under 35 U.S.C. § 103 (a) as being obvious over U.S. Patent No. 6,223,143 ("Weinstock") in view of U.S. Patent Publication No. 2005/0060213 ("Lavu") and further in view of Booth et al., *Meeting Future Drilling Planning and Decision Support Requirements: A New Drilling Simulator*, Schlumberger 2001 ("Booth"). To the extent that this rejection may still apply to the pending claims, the rejection is respectfully traversed.

MPEP § 2143 states that "[t]he key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit." Further, when combining prior art elements, the Examiner "must articulate the following: (1) a finding that the prior art included each element claimed, although not necessarily in a single prior art reference, with the only difference between the claimed invention and the prior art being the lack of actual combination of the elements in a single prior art reference; ..." MPEP § 2143(A).

Amended independent claim 1 recites, in part, "calculating a plurality of ranked individual risks extending along a depth of said wellbore in response to the ranking step" and "displaying said risk information, the displaying step including displaying said risk information on a risk information display, said risk information display including a simultaneous display of said plurality of ranked individual risks calculated along said depth of said wellbore." In other words, amended independent claim 1 requires, in part, determining a value for a number of risks along a number of

depths for a wellbore and then simultaneously displaying each of the risk values for each of the depths along the wellbore. *See* originally-filed specification at paragraphs [0111] and [0116].

The Examiner admits that Weinstock fails to teach "displaying said risk information ... as a function of depth in a wellbore." Office Action dated December 23, 2008, pg. 6. Further, Lavu fails to provide that which Weinstock lacks as Lavu is only relied on to teach limitations related to ranking categories. *See* Office Action dated December 23, 2008, pg. 7. Instead, the Examiner relies on Booth to teach "visualization techniques for displaying risk information associated with the depth of a wellbore." *Id.*

Booth teaches generating a 3D image of a section of the wellbore for an operational plan, where the 3D image also includes risk information for the section of the wellbore. *See* Booth, page 4, Wellbore State Window. Specifically, Booth teaches that the 3D image may include a representation of mechanical stability and risk information related to five specific risks of the section of the wellbore. *See id.* Further, Booth only teaches that the risk information is applicable to the entire section of the wellbore displayed. *See* Booth, Fig. 11 (showing the "traffic lights" displayed separate from the wellbore). Thus, Booth only teaches determining and displaying *a single value* for each risk in terms of the current section of the wellbore displayed. However, Booth fails to teach simultaneously displaying risk information for *each of the risks* extending *along the depth* of the wellbore. In view of this, Booth fails to teach or suggest determining a value for a number of risks along a number of depths for a wellbore and then simultaneously displaying each of the risk values for each of the depths along the wellbore as recited in amended independent claim 1.

In view of the above, Weinstock, Lavu, and Booth, whether considered separately or in combination, fail to teach or suggest all the limitations of amended independent claim 1. Thus,

amended independent claim 1 is patentable over Weinstock, Lavu, and Booth. Claims 19, 23, and 41 include substantially similar limitations and, thus, are patentable over Weinstock, Lavu, and Booth for at least the same reasons as claim 1. Dependent claim 2-18, 20-22, 24-40, and 42-44 depend, directly or indirectly, from claims 1, 19, 23, and 41 and are patentable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 09469/028001).

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Respectfully submitted,

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Attachment (Terminal Disclaimer)

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